

IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF PENNSYLVANIA

JEANETTE SCICCHITANO SMITH, : CIVIL ACTION
et al. :
v. :
: NO. 21-4983
SPECTRUM BRANDS, INC., et al. :

MEMORANDUM

Bartle, J.

August 10, 2022

Plaintiffs Jeanette Scicchitano Smith and Alexander Smith, wife and husband, have sued defendants Spectrum Brands Inc., Spectrum Brands Pet Group Inc., and United Pet Group Inc. (collectively "Spectrum Brands") in this diversity action for strict liability and negligence.¹ Plaintiffs claim that an aquarium kit manufactured and sold by Spectrum Brands was defective and caused a fire at their residence. Before the court is defendants' motion to exclude at trial the opinions of plaintiffs' expert, Christoph Flaherty.

I

The facts for present purposes are taken in the light most favorable to plaintiffs. On or about November 3, 2019, a fire broke out at plaintiffs' home in Lincoln University,

1. Plaintiffs also pleaded a claim for breach of warranty in their complaint. Plaintiffs state in their opposition to defendants' motion for summary judgment that they will not pursue this claim at trial.

Pennsylvania. Plaintiffs had returned that day from vacation to find extensive smoke and soot damage throughout their home.

Alexander Smith followed the damage to his basement and noticed that the electricity was out. He discovered the remains of his six-gallon aquarium tank which was melted and torched. The pump motor for the tank was still plugged into the outlet on the wall but nothing was running. Once he unplugged the tank and flipped the breaker switch, the electricity in the basement came back on.

West Grove Fire Department and the Chester County Fire Marshal reported to the scene that same day. Fire Marshal John Weer of the Chester County Fire Marshal's Office investigated the scene and interviewed plaintiffs. Weer concluded that the fire originated from the tank in the basement. After determining that the fire was accidental, he concluded his investigation.

Plaintiffs moved out of their home for nine months while repairs were being made as a result of the fire. Plaintiffs hired Robert Buckley, a certified fire investigator, to determine the origin and cause of the fire. Buckley concluded that the fire originated from the aquarium tank. He identified the outlet, the tank's pump motor, the tank's heater, and the tank's light as possible sources of the fire but in the end ascertained that the pump motor was the source of the fire.

Plaintiffs also hired Christoph Flaherty, an electrical engineer, to conduct an investigation. His testimony and opinion are the subject of this motion to exclude.

Flaherty is a private engineer licensed in Pennsylvania, among other states.² He holds a Master of Science in electrical engineering from Tufts University and a Bachelor of Science in physics from the United States Naval Academy. The National Association of Fire Investigators certified him in 2004. He has had his own engineering consulting company since 2009 and has worked in the electrical engineering field with both the United States Navy and the private sector for over twenty-five years.

As part of his investigation, Flaherty spoke with Buckley and the fire marshal. He also examined the fire marshal's report, over 380 photographs of the pump motor and the scene of the fire, depositions of plaintiffs and other witnesses, and design drawings provided by Spectrum Brands. In addition, he conducted general research.

Flaherty opined that the tank's pump motor was defective in that it lacked a thermal production device to shut

2. Flaherty testified that while he has a license in Pennsylvania, it is not currently up to date as he needs to submit a continuing education form. He expects he will be licensed again soon.

the pump off if it overheated before a fire could start and that any impedance protection the motor had was inadequate.

Plaintiffs had purchased the aquarium tank kit in 2002 or 2003. The kit included the tank itself, a filter pump motor, and a hood with a light. The pump operated continuously once plugged in to clean the tank through an electric motor that pumps water through a filter and back into the aquarium. Smith also purchased a heater for the tank at a later time. At the time of the fire the pump motor was plugged in, but the light for the tank was not.

Smith used the tank initially as a show tank for about a year and then occasionally as a quarantine tank for sick fish. He estimates that he used the tank a total of two years since he bought the tank in 2002 or 2003 until it burned in the fire in 2019. He had been using it to quarantine two sick fish for approximately three to four weeks before and at the time of the fire. It was operating without any issues as far as Smith was aware. When not in use, the tank was unplugged on a shelf in a closet in the basement.

II

Rule 702 of the Federal Rules of Evidence provides that:

A witness who is qualified as an expert by knowledge, skill, experience, training, or

education may testify in the form of an opinion or otherwise if:

- (a) the expert's scientific, technical, or other specialized knowledge will help the trier of fact to understand the evidence or to determine a fact in issue;
- (b) the testimony is based on sufficient facts or data;
- (c) the testimony is the product of reliable principles and methods; and
- (d) the expert has reliably applied the principles and methods to the facts of the case.

The preeminent case on Rule 702 is Daubert v. Merrell Dow Pharmaceuticals, Inc. in which the Supreme Court explained that "under the Rules the trial judge must ensure that any and all scientific testimony or evidence admitted is not only relevant, but reliable." 509 U.S. 579, 589 (1993). This standard also applies to "technical" and "other specialized" knowledge under Rule 702 and not just to "scientific" knowledge. Kumho Tire Co., LTD. v. Carmichael, 526 U.S. 137, 141 (1999).

Testimony is relevant if it will "assist the trier of fact to understand the evidence or to determine a fact in issue." Daubert, 509 U.S. at 591. Reliability requires that the testimony "be based on the 'methods and procedures of science' rather than on 'subjective belief or unsupported speculation.'" Schneider ex rel. Estate of Schneider v. Fried, 320 F.3d 396, 404 (3d Cir. 2003). Rule 702 permits experts a

"wide latitude to offer opinions" while the court acts in a "gatekeeping role." Daubert, 509 U.S. at 592, 597.

A Rule 702 inquiry is a "flexible one" that is focused "solely on principles and methodology, not on the conclusions that they generate." Id. at 594-95. Some factors, though not the only factors, that a court might consider when determining the reliability of an expert's testimony are whether the theory can be and has been tested, whether it has been subjected to peer review, what the rate of error is, and whether the theory is generally acceptable. Id. at 593-94. While an expert need not rule out all other possible causes of injury, obvious alternative causes must be ruled out. Heller v. Shaw Indus., Inc., 167 F.3d 146, 156 (3d Cir. 1999).

The party presenting the expert need not show that the opinions of the expert are correct but rather that by a preponderance of the evidence the opinions of the expert are reliable. In re Paoli R.R. Yard PCB Litig., 35 F.3d 717, 744 (3d Cir. 1994). Instead "[t]he analysis of the conclusions themselves is for the trier of fact." Kannankeril v. Terminix Int'l, Inc., 128 F.3d 802, 807 (3d Cir. 1997). Rule 702 "has a liberal policy of admissibility." Id. at 806.

The opposing party may attack expert testimony using "[v]igorous cross-examination, presentation of contrary evidence, and careful instruction on the burden of proof."

Daubert, 509 U.S. at 596. Additionally, “[c]redibility is for the jury.” Kannankeril, 128 F.3d at 809-10. The jury is tasked with making “[d]eterminations regarding the weight to be accorded, and the sufficiency of, the evidence relied upon by the proffered expert.” Walker v. Gordon, 46 F. App’x 691, 695 (3d Cir. 2002).

III

Our Court of Appeals has explained that Rule 702 requires expert testimony to meet three standards: “qualification, reliability and fit.” Schneider, 320 F.3d at 404.

Qualification requires the expert to have specialized expertise. Id. Defendants do not contest the qualifications of Flaherty as an expert in this matter. Flaherty is trained as an electrical engineer and has decades of experience in fire investigation, specifically electrical fire. He is qualified by his education, training, and work history to testify on the engineering design of the product and the electrical fire source as an expert in this matter.

Defendants also do not contest the fit of his testimony. Fit requires that the testimony be relevant to the issues of the case so as to assist the trier of fact. Id. Flaherty investigated the origin of this electrical fire and testified to the source and scope of that fire as well as the

design of the motor. This testimony would clearly help the trier of fact understand the evidence presented regarding the aquarium tank and thus fits the case.

Defendants seek to exclude at trial Flaherty's opinions on the basis that his methods and procedures are not reliable as required by Rule 702 and Daubert. Reliability requires that an expert's opinions be based on sound methods and procedures. Id.

Defendants argue that Flaherty's opinions are based on speculation as he did not conduct any physical tests on this motor or other similar motors with or without the thermal protection device he opines should have been included, and he did not review any literature on this matter. Defendants also contend that Flaherty did not attempt to rule out potential alternative causes of the fire. Plaintiffs counter that Flaherty relied on the established scientific method and the National Fire Protection Association ("NFPA") 921 guide for fire investigations in forming his well-grounded opinions.

Flaherty furnished an expert report and response to the report of defendants' expert and testified at a deposition. At his deposition, he opined that the fire was caused by the overheating of the pump motor which was defective in that it lacked a thermal protection device to shut it down in the case of overheating and that any impedance protection it had, if any,

was inadequate. Specifically, he testified that the design specifications and x-rays of the motor show that there was no device providing thermal protection or temperature sensing protection and that the motor would have been safer and more reliable with a thermal protection device to shut off the motor when a certain temperature is reached. Flaherty opined that a properly selected thermal protector should have prevented the pump from overheating and that a thermal cutoff only costs a few cents. He further declared that other motors manufactured at the same time as the pump motor in this case had thermal cutoff devices.

While he could not testify as to the specific device he would use since he did not know the operating temperature of this motor, he did discuss multiple different devices and their respective wattages and set points for this type of motor. He also discussed where on the motor he would place the device, likely on top of or in between the windings carrying the electrical current. Defendants in their supporting brief do not challenge that such devices were in existence or were feasible to install on the motor that is the subject of this lawsuit.

As noted, to form his opinion, Flaherty reviewed the fire marshal's report, deposition testimony, over 380 photographs of the motor, tank, and fire, and design drawings provided by Spectrum Brands, and he engaged in general research.

In addition, he conducted an examination of the evidence alongside defendants' expert, and he spoke with plaintiffs' fire investigator, Robert Buckley. Flaherty used the scientific method to define the problem, collect data, analyze the data, formulate hypotheses, and test those hypotheses.

Defendants argue that Flaherty did not test the motor. The Supreme Court explained in Daubert that "a key question to be answered in determining whether a theory or technique is scientific knowledge that will assist the trier of fact will be whether it can be (and has been) tested." Daubert, 509 U.S. at 593. Because of the extensive damage to the pump motor, it is difficult to see how Flaherty could have done much testing. While he did not perform a physical test of the motor, he did perform cognitive testing, or "ideas of how those items might work together," regarding his hypotheses in accordance with the scientific method. In doing so, he described the internal electrical arcing of the windings due to overheating and the progression of heat damage.

Flaherty's method is in accordance with NFPA 921 standards which sets forth the scientific method as the acceptable approach. NFPA 921 outlines the necessary steps one must take, including defining the problem, collecting data, analyzing data, developing a hypothesis through inductive

reasoning, testing the hypothesis through deductive reasoning, and selecting a final hypothesis.

To define the problem, NFPA 921 provides that one should examine the scene and collect data "such as the review of previously conducted investigations of the incident, the interviewing of witnesses or other knowledgeable persons, and the result of scientific testing." NFPA 921 states that analysis of data is "based on the knowledge, training, experience, and expertise of the individual doing the analysis." For testing the hypothesis, NFPA 921 instructs that "[t]esting of the hypothesis is done by the principle of deductive reasoning, in which the investigator compares the hypothesis to all known facts as well as the body of scientific knowledge associated with the phenomena relevant to the specific incident." Moreover, it provides that "[a] hypothesis can be tested physically by conducting experiments, analytically by applying accepted scientific principles, or by referring to scientific research."

Flaherty performed his investigation in accordance with these standards. He defined the problem by speaking to the relevant parties and examining the evidence. He collected data and formed hypotheses based on his training and experience. Finally, he tested those hypotheses through analytical reasoning based on scientific principles of electrical engineering. NFPA

921 does not require physical testing. See Allstate Ins. Co. v. LG Elecs. USA, Inc., 2021 WL 2875603, at *4 (E.D. Pa. July 8, 2021). In addition, the motor itself was at least partially destroyed in the fire. Defendants' contention that Flaherty's method and procedure is not reliable because he did not physically test this motor or other similar motors is without merit.

Flaherty's procedure of investigating the fire in accordance with NFPA 921 also supports other factors in assessing reliability of an expert, specifically general acceptance and compliance with standards for this technique. See In re Paoli, 35 F.3d at 742. So too do Flaherty's qualifications to conduct this type of analysis support the reliability of his testimony. See id.

Flaherty also ruled out various alternative causes of the fire. His initial hypotheses for the source of the fire included the failure of the power cord, the failure of the aquarium lamp or windings, the failure of the aquarium heater, or the failure of the aquarium pump motor. He eliminated each of these other potential sources except for the pump motor. Defendants point to the possibility of water reaching the windings in the pump motor or a locked rotor as reasons for the fire. Both of these possibilities, however, indicate failure of

the pump motor itself which Flaherty concluded was the source of the fire.

Defendants also aver that a power surge could have caused the excessive current that started the fire. There is no evidence in the record of a power surge either in the nearby area or in plaintiffs' house on the weekend in question. Our Court of Appeals has explained that an expert need only rule out "[o]bvious alternative causes." Heller, 167 F.3d at 156. Flaherty has properly done so here and was not obligated to opine further on the matter.

In support of their arguments to exclude, defendants rely heavily on Oddi v. Ford Motor Co., a products liability case about the crashworthiness of a vehicle in which our Court of Appeals affirmed the district court's exclusion of the plaintiff's expert. 234 F.3d 136 (3d Cir. 2000). In that case, the plaintiff's expert testified that a truck should have had a stronger bumper. The Court found that the expert conducted a "haphazard, intuitive inquiry" because he failed to test any hypothesis, and he did not even consider that the guardrail that the plaintiff crashed into had played a factor in the plaintiff's injuries, rather than the bumper design. Id. at 156-57. The expert also conceded that his proposed solution of strengthening the bumper could have resulted in even greater injury to the plaintiff based on the force applied to the truck.

Id. at 157. The Court concluded that since the expert did not conduct any tests or attempt to calculate the impact of his proposed solution on the plaintiff, "he used little, if any, methodology beyond his own intuition." Id. at 158.

Unlike the expert in Oddi, Flaherty followed the scientific method as outlined in NFPA 921 and performed cognitive testing on his hypotheses. He also ruled out alternative causes of the fire. His opinion is not the result of a "haphazard, intuitive inquiry."

Defendants also rely on Booth v. Black & Decker, Inc. in which the district court excluded the plaintiff's expert who testified that defendant's toaster oven caused a fire. 166 F. Supp. 2d 215 (E.D. Pa. 2001). Once again, the expert did not test his hypotheses, and the court specifically cited to NFPA 921 in finding that the plaintiff did not follow any demonstrated methodology contained therein. Id. at 220. That is not the case here. As previously stated, Flaherty tested his hypotheses and conducted his investigation in accordance with NFPA 921. Moreover, "NFPA standards do not require physical experimentation." Allstate Ins. Co., 2021 WL 2875603 at *4.

Defendants note that Flaherty did not know the operating temperature of the pump motor, the temperature of the potting material in which the pump motor was encased, or the size for a thermal cutoff device. Defendants also argue that

Flaherty should have attempted to install a thermal protection device on a similar product or attempt to locate a similar motor to study.

It is up to the jury, however, as the trier of fact to determine whether his analysis is correct, whether he is a credible witness, and what weight to apply to his conclusions. See Kannankeril, 128 F.3d at 809-10. Defendants may dispute Flaherty's testimony on cross-examination and with their own expert witness, if any. See Daubert, 509 U.S. at 596.

Flaherty's opinions are reliable as they are based on scientific principles and sound methodologies. He followed the scientific method in accordance with NFPA 921 and tested his hypotheses and ruled out alternative causes. The fact that defendants dispute his conclusions regarding the source of the fire and the ways the motor should have been designed does not alter this conclusion. Flaherty's analysis does not have to be correct or without flaw to be admitted. In re Paoli, 35 F.3d at 744. Instead, the party presenting the expert need only show that by a preponderance of the evidence the opinions of the expert are reliable. Id. Plaintiffs have done so.

As Flaherty is qualified, his testimony fits the issues of this case, and his opinions are reliable, this court will admit him as an expert to testify at trial on behalf of plaintiffs.